

Figure 1. Absorption spectrum of original PTR glass

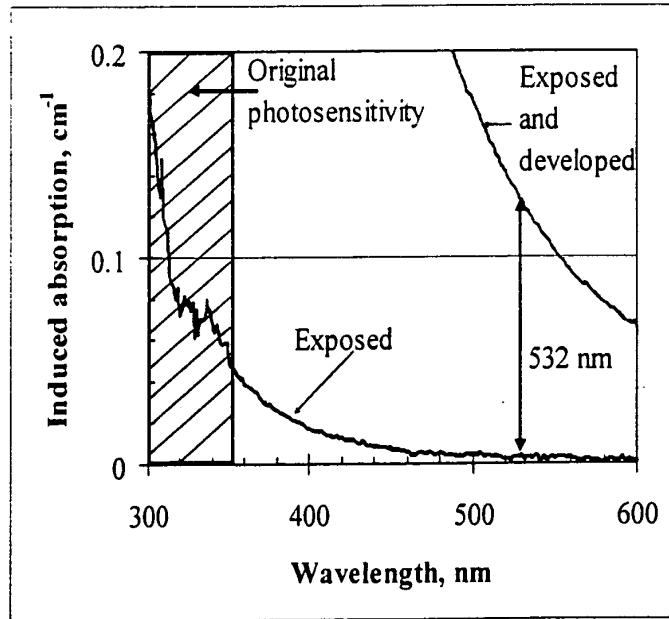


Figure 2. Additional absorption spectra of original PTR glass after UV exposure and thermal development at 520°C.

Fig. 3

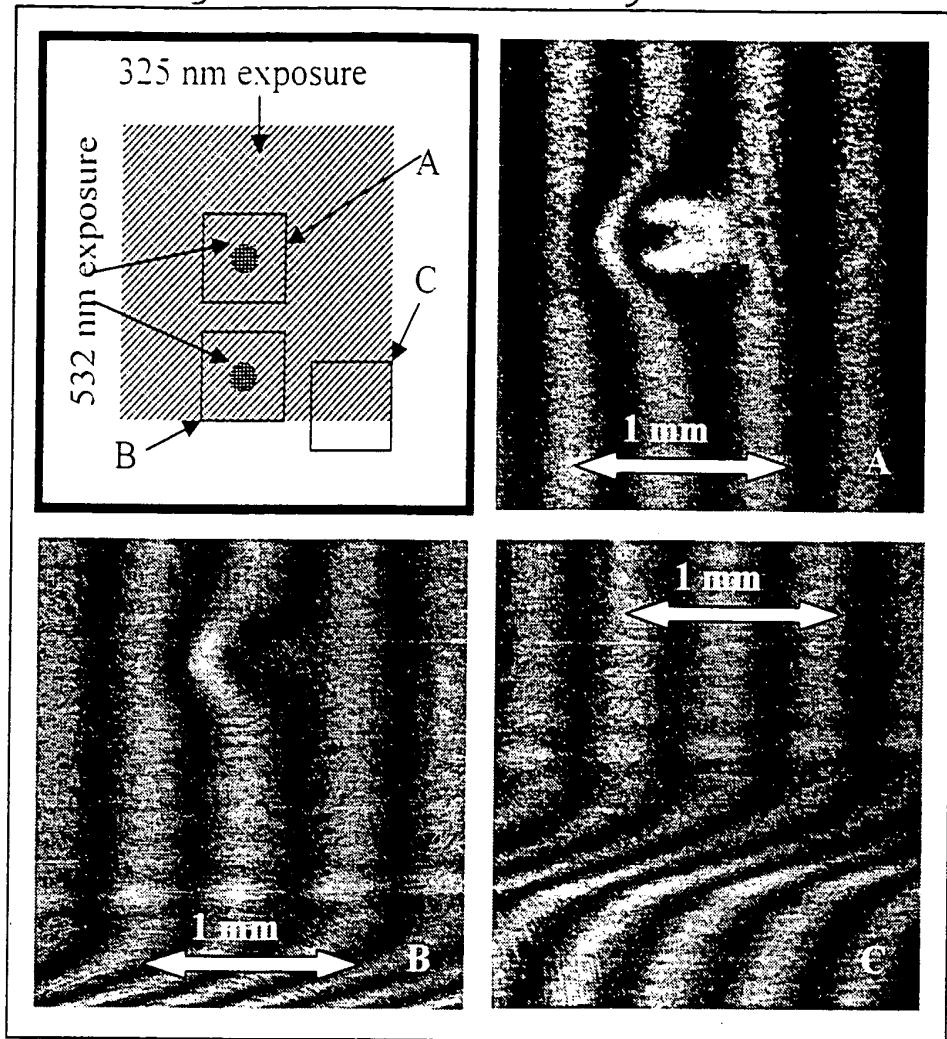


Fig. 3A

Fig. 3B

Fig. 3C

Figure 3. Interferograms of a PTR sample after UV exposure at 325 nm (square spot) followed by visible exposure at 532 nm (round spots) and thermal development at 520°C. UV exposure is 1 J/cm², visible exposure is 10 ns pulses at 14 Hz for 120 s focused in spot of 100 μm diameter at power density of 60 GW/cm² (A) and 30 GW/cm² (B). C shows border of UV exposure.

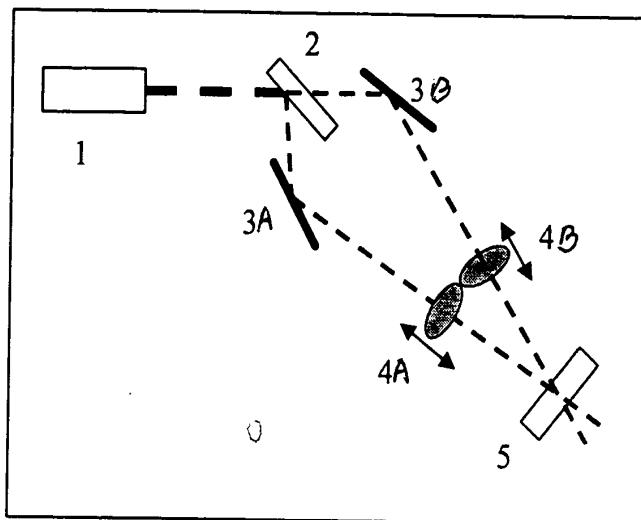


Fig. 4. Diagram of hologram recording in PTR glass 1-Minilite II Nd:YAG laser 25 mJ/pulse at 532 nm, 2-Beamsplitter, 3-Total mirrors, 4-Focusing lenses on translational stages, 5-PTR glass sample.

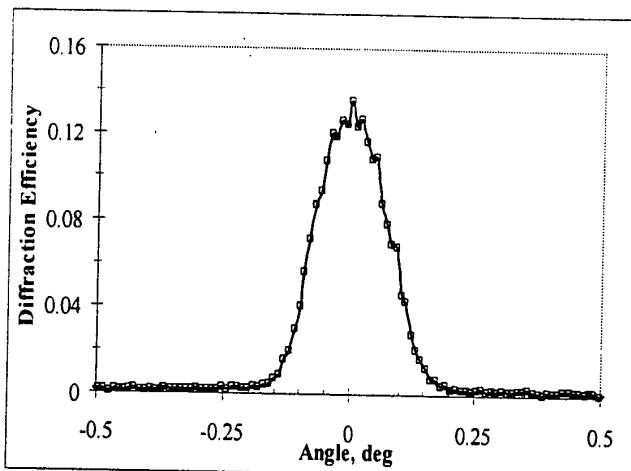


Fig. 5. Dependence of diffraction efficiency of PTR Bragg grating recorded by visible radiation at 532 nm on detuning from Bragg angle. The grating was recorded in UV exposed PTR glass plate by interference of two convergent beams of visible radiation at 532 nm.

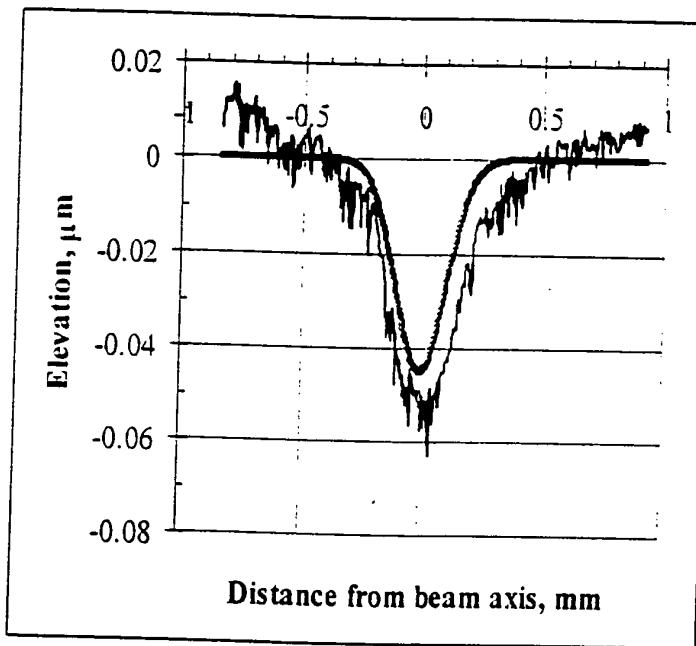


Fig. 6. Surface profile of UV exposed PTR glass irradiated by 532 nm. Sample undergone thermal treatment at 520°C for 30 min. 1-surface profile, 2- beam profile of Nd:YAG laser at 532 nm.